## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
## BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of:                                     Date: July 12, 2007

Brian G. PAYTON et al.                                   Conf. No.: 9134

Serial No: 10/620,857                                    Group Art Unit: 2162

Filed:  July 15, 2003                                    Examiner: Giovanna B. Colan

Title:   MODEL TOOL AND METHOD FOR VISUALLY GROUPING AND
         UNGROUPING PREDICATES

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
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## BRIEF ON APPEAL

### (1)     Real Party in Interest

The real party in interest is International Business Machines Corporation by virtue

of an assignment from the inventors recorded in the U.S. Patent Office on December 10,

2003, reel no. 014185, frame no. 0886.

### (2)     Related Appeals and Interferences

There are no appeals, interferences, or judicial proceedings known to Appellant,

the Appellant's legal representative, or Assignee, which may be related to, directly affect,

be directly affected by, or have a bearing on the decision by the Board of Patent Appeals

and Interferences in the pending appeal.

**(3)     Status of Claims**

Claims 1-8, 15-19, 22-25, 32-36, 39-42, and 49-54 stand rejected under 35 U.S.C. §

103(a) as being unpatentable over U.S. Patent No. 5,421,008 ("Banning") in view of

"Kaleidoquery: A Visual Query Language for Object Databases" ("Murray").

Claims 9-14, 26-31, and 43-48 stand rejected under 35 U.S.C. § 103(a) as being

unpatentable over Banning and Murray, in further view of U.S. Patent Publication No.

2005/0004911 ("Goldberg").

Claims 3-4, 20-21, and 37-38 were previously cancelled.

Claims 1-2, 5-19, 22-36, and 39-54 are being appealed.

**(4)     Status of Amendments**

No claim amendments have been made subsequent to the final rejection and,

consequently, there are no unentered amendments.

**(5)     Summary of Claimed Subject Matter**

Relational databases are typically organized into tables that consist of rows and

columns of data. Data from a relational database is commonly retrieved using a

structured query language (SQL) interface. Query languages such as SQL require some

expertise to write effectively. Accordingly, query tools have been developed to assist in

the creation of query statements. Specification, page 2, line 21 – page 3, line 11.

Conventional query tools, however, provide a limited representation of complex query

elements in formats that are not readily understandable to a developer.

Accordingly, independent claim 1 recites a query assist tool for assisting a user in

creating and/or editing a query statement. The query assist tool has a user interface for

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building queries and a query model definition to populate a query model instance with elements of the created query statement. Specification, page 8, line 21 – page 9, line 1. In particular, the user interface includes means for visually displaying a search condition of a query statement in a first display area. Specification, page 10, lines 18–19, FIG. 3A (search condition region 36). The user interface further includes means for visually selecting two or more predicates of the displayed search condition for grouping. Specification, page 11, line 21 – page 12, line 3. The user interface further includes means responsive to selection of the two or more predicates for visually indicating the grouping in the first display area, in which the means for indicating the grouping further comprises one or more of indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol. Specification, page 12, lines 3-5.

Independent claim 18 recites a method for assisting a user in creating and/or editing a query statement. The method utilizes a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement. Specification, page 8, line 21 – page 9, line 1. The method includes visually displaying a search condition of a query statement in a first display area of the user interface. Specification, page 10, lines 18–19, FIG. 3A (search condition region 36). The method further includes visually selecting two or more predicates of the displayed search condition for grouping. Specification, page 11, line 21 – page 12, line 3. The method further includes visually indicating the grouping in the first display area in response to selection of the two or more predicates, wherein the grouping further

comprises one or more of indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol. Specification, page 12, lines 3-5.

Independent claim 35 recites an article of manufacture comprising a computer program carrier readable by a computer and embodying one or more instructions executable by the computer. The computer program provides a query assist tool for assisting a user in creating and/or editing a query statement, in which the query assist tool has a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement. Specification, page 8, line 21 – page 9, line 1. The user interface comprises program instructions for visually displaying a search condition of a query statement in a first display area of the user interface. Specification, page 10, lines 18–19, FIG. 3A (search condition region 36). The user interface further comprises program instructions for visually selecting two or more predicates of the displayed search condition for grouping. The user interface further comprises program instructions for visually indicating the grouping in the first display area in response to selection of the two or more predicates, wherein the grouping further comprises one or more of indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol. Specification, page 12, lines 3-5.

**(6)     Grounds of Rejection to be Reviewed on Appeal**

1. Appellant requests review as to claims 1-8, 15-19, 22-25, 32-36, 39-42, and 49-54 and their rejection under 35 U.S.C. § 103(a) as being unpatentable over Banning in Murray.

2. Appellant requests review as to claims 9-14, 26-31, and 43-48 and their rejection under 35 U.S.C. § 103(a) as being unpatentable over Banning and Murray, in further view Goldberg.

**(7)     Argument**

1.     **Claims 1-8, 15-19, 22-25, 32-36, 39-42 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Banning in Murray.**

Claim 1 recites a query assist tool having a user interface for assisting a user in creating and/or editing a query statement. In particular, the user interface includes means responsive to the selection of two or more predicates (of a query statement) for visually indicating the grouping of the two or more predicates in a first display area of the user interface. The means for indicating the grouping (of the two or more predicates) comprises one or more of: <u>indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol</u> (emphasis added).

A. *Banning Fails To Disclose Means For Visually Indicating A Grouping Of Two*

*Or More Predicates In A First Display Area, In Which The Grouping Is*

*Indicated By One Or More Of:  Indenting The Grouped Predicates Relative*

*To Other Predicates Of A Search Condition, Positioning The Grouped*

*Predicates Adjacent To Each Other, And Delineating The Grouped Predicates*

*With Parenthesis Or An Equivalent Symbol*

Banning discloses a method, system, and program for interactive graphical

construction of a database query. The system employs a graphical query interface and a

relational database to provide a natural interface for a database user (see Abstract). The

Examiner recognizes that Banning fails to disclose visually indicating a grouping through

indentation, adjacent positioning, or delineation by a symbol (see page 4 of Office

Communication mailed 22 August 2006). The Examiner, however, asserts that this

limitation absent from Banning and recited in claim 1 is disclosed by Murray.

B. *Murray Fails To Disclose Means For Visually Indicating A Grouping Of Two*

*Or More Predicates In A First Display Area, In Which The Grouping Is*

*Indicated By One Or More Of: Indenting The Grouped Predicates Relative*

*To Other Predicates Of A Search Condition, Positioning The Grouped*

*Predicates Adjacent To Each Other, And Delineating The Grouped Predicates*

*With Parenthesis Or An Equivalent Symbol*

Murray discloses a visual query language (Kaleidoquery) for object databases. In

particular, Murray discloses that Kaleidoquery depicts a query as a filter flow (see

paragraph 4). Throughout the paper, Murray provides example filter flows that are

displayed to a user and corresponding object query language statements (see paragraph 5).

For example, the visual query (filter flow) illustrated in FIG. 12 (page 252) corresponds

to the object query language statement listed in paragraph 46 (page 251).

The Examiner cites page 251, paragraph 46 and page 253, paragraph 61 of Murray

as disclosing means for visually indicating a grouping of two or more predicates by one or

more of: indenting the grouped predicates relative to other predicates of a search

condition, positioning the grouped predicates adjacent to each other, and delineating the

grouped predicates with parenthesis or an equivalent symbol.

Applicant respectfully disagrees. The cited portions refer to object query language

statements that are <u>not displayed to a user</u>. Rather, the visual queries that correspond to

the object query language statements cited by the Examiner are respectively depicted in

Figure 12 (page 252) and Figure 16 (page 253). The groups of predicates illustrated in

Figures 12 and 16 are visually depicted using windows and connectors. See, for example,

Figure 16 (items name, age, salary, and up arrows) and Figure 12 (arrows for employer

and location = England). Although Murray graphically depicts queries, including

predicates, Murray (as with Banning) fails to disclose means for visually indicating a

grouping of two or more predicates by one or more of: indenting the grouped predicates

relative to other predicates of a search condition, positioning the grouped predicates

adjacent to each other, and delineating the grouped predicates with parenthesis or an

equivalent symbol.

C. *The claim has limitations not taught by either reference*

To establish *prima facie* obviousness of a claimed invention, all the claim

limitations must be taught or suggested by the prior art. *In re Vaeck*, 947 F.2d 488, 20

USPQ2d 1438 (Fed. Cir. 1991).

Neither Banning nor Murray discloses means for visually indicating a grouping of

two or more predicates by one or more of: indenting the grouped predicates relative to

other predicates of a search condition, positioning the grouped predicates adjacent to each

other, and delineating the grouped predicates with parenthesis or an equivalent symbol.

Consequently, the combination of Banning and Murray cannot render claim 1 obvious.

Claims 2-8, 15-17, and 52 depend from claim 1 and are, therefore, improperly rejected for

at least the same reasons.

Independent claims 18 and 35 each incorporates limitations similar to those of

claim 1 and are, therefore, improperly rejected for at least the same reasons. Claims 19,

22-25, 32-34, and 53 depend from claim 18, and claims 36, 39-42, and 54 depend from

claim 35. These claims are improperly rejected for at least the same reasons.

2.      **Claims 9-14, 26-31, and 43-48 are not properly rejected under 35 U.S.C. §
        103(a) as being unpatentable over Banning and Murray, in further view
        Goldberg.**

Claims 9-14 depend from claim 1, claims 26-31 depend from claim 18, and claims

43-48 depend from claim 35.

D.   *Goldberg Fails To Disclose Means For Visually Indicating A Grouping Of*

*Two Or More Predicates In A First Display Area, In Which The Grouping Is*

*Indicated By One Or More Of: Indenting The Grouped Predicates Relative*

*To Other Predicates Of A Search Condition, Positioning The Grouped*

*Predicates Adjacent To Each Other, And Delineating The Grouped Predicates*

*With Parenthesis Or An Equivalent Symbol*

Putting aside the issue of whether Goldberg discloses the limitations of claims

9-14, 26-31, and 43-48, Goldberg (as with Banning and Murray) fails to disclose means

for visually indicating a grouping of two or more predicates by one or more of: indenting

the grouped predicates relative to other predicates of a search condition, positioning the

grouped predicates adjacent to each other, and delineating the grouped predicates with

parenthesis or an equivalent symbol, as required by claim 1. Nor does the Examiner cite Goldberg as disclosing this limitation. Appellant respectfully submits that claims 9-14, 26-31, and 43-48 are, therefore, improperly rejected for reasons similar to those discussed above.

## Conclusion

Neither Banning, Murray nor Goldberg discloses means for visually indicating a grouping of two or more predicates by one or more of: indenting the grouped predicates relative to other predicates of a search condition, positioning the grouped predicates adjacent to each other, and delineating the grouped predicates with parenthesis or an equivalent symbol. Appellant, therefore, respectfully submits that independent claims 1, 18, and 36 (and the claims that depend therefrom) are not properly rejected under § 103.

Please charge any fee that may be necessary for the continued pendency of this application to Deposit Account No. 09-0460 (IBM Corporation).

Respectfully submitted,

SAWYER LAW GROUP LLP

July 12, 2007
Date

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## Appendix of Claims

1. (Previously Presented) A query assist tool for assisting a user in creating and/or editing a query statement, the query assist tool having a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement, the user interface comprising:

means for visually displaying a search condition of a query statement in a first display area; and

means for visually selecting two or more predicates of the displayed search condition for grouping; and

means responsive to selection of the two or more predicates for visually indicating the grouping in the first display area, wherein the means for indicating the grouping further comprises one or more of the group consisting of:

indenting the grouped predicates relative to other predicates of the search condition;

positioning the grouped predicates adjacent to each other; and

delineating the group with parenthesis or an equivalent symbol.


2. (Original) The query assist tool of claim 1, wherein the selecting means further comprises means for highlighting the two or more predicates.


3-4. (Cancelled)

5.      (Original)  The query assist tool of claim 1, further comprising means for confirming selection of the two or more predicates for grouping.

6.      (Original)  The query assist tool of claim 5, wherein the means for indicating grouping are responsive to selection confirmation.

7.      (Original)  The query assist tool of claim 5, wherein the confirming means further comprises one or more of the group consisting of: a selectable button displayed in a second display area, a mouse click, a keystroke, and the equivalent of any of the foregoing.

8.      (Original)  The query assist tool of claim 5, wherein activation of the confirming means causes a model instance to be updated with the selected grouping.

9.      (Original)  The query assist tool of claim 3, further comprising means for selecting one or more of grouped predicates for ungrouping.

10.     (Original)  The query assist tool of claim 9, further comprising means, responsive to grouped predicate selection, for removing the indications of grouping from the first display area.

11.     (Original)  The query assist tool of claim 9, further comprising means for confirming selection of the one or more grouped predicates for ungrouping.

12.     (Original)  The query assist tool of claim 11, further comprising means responsive to selection confirmation for removing the indications of the grouping from the first display area.

13.     (Original)  The query assist tool of claim 11, wherein the confirming means further comprises one or more of the group consisting of: a selectable button displayed in a second display area, a mouse click, a keystroke, and the equivalent of any of the foregoing.

14.     (Original)  The query assist tool of claim 11, wherein activation of the confirming means causes a model instance to be updated with the selected ungrouping.

15.     (Original)  The query assist tool of claim 1, wherein the means for displaying the search condition further comprises means for displaying each search predicate in a separate line of the first display area.

16.     (Original)  The query assist tool of claim 1, wherein displaying the search condition further comprises means for displaying each operator in a separate line of the first display area.

17.     (Original)  The interface of claim 1, wherein the interface is further coupled to an application interface for receiving a query statement from an application for populating

the interface.

18.    (Previously Presented)  A method for assisting a user in creating and/or editing a query statement, the method utilizing a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement, the method comprising the steps of:

visually displaying a search condition of a query statement in a first display area of the user interface;

visually selecting two or more predicates of the displayed search condition for grouping; and

visually indicating the grouping in the first display area in response to selection of the two or more predicates, wherein the grouping further comprises one or more of the group consisting of:

indenting the grouped predicates relative to other predicates of the search condition;

positioning the grouped predicates adjacent to each other; and

delineating the group with parenthesis or an equivalent symbol.

19.    (Original)  The method of claim 18, wherein the selecting step further comprises the step of highlighting the two or more predicates.

20-21. (Cancelled)

22.    (Original)  The method of claim 18, further comprising the step of confirming selection of the two or more predicates for grouping.

23.    (Original)  The method of claim 22, wherein the step of indicating grouping is responsive to selection confirmation.

24.    (Original)  The method of claim 22, wherein the confirming step further comprises one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

25.    (Original)  The method of claim 22, where confirmation causes a model instance to be updated with the selected grouping.

26.    (Original)  The method of claim 20, further comprising the step of selecting one or grouped predicates for ungrouping.

27.    (Original)  The method of claim 26, further comprising the step of means removing the indications of grouping from the first display area in response to the step of selecting grouped predicates.

28.    (Original)  The method of claim 26, further comprising the step of confirming selection of the one or more grouped predicates for ungrouping.

29.     (Original)  The method of claim 28, further comprising the step of removing the indications of the grouping from the first display area in response to selection confirmation.

30.     (Original)  The method of claim 28, wherein the confirming step comprises one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

31.     (Original)  The method of claim 28, where confirmation causes a model instance to be updated with the selected ungrouping.

32.     (Original)  The method of claim 18, wherein the step of displaying the search condition further comprises the step of displaying each search predicate in a separate line of the first display area.

33.     (Original)  The method of claim 18, wherein the step of displaying the search condition further comprises the step of displaying each operator in a separate line first display area.

34.     (Previously Presented)  The method of claim 18, further comprising the step of receiving a query statement from an application for populating the interface.

35.    (Previously Presented)  An article of manufacture comprising a computer program carrier readable by a computer and embodying one or more instructions executable by the computer, the computer program providing a query assist tool for assisting a user in creating and/or editing a query statement, the query assist tool having a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement, the user interface comprising:

program instructions for visually displaying a search condition of a query statement in a first display area of the user interface; and

program instructions for visually selecting two or more predicates of the displayed search condition for grouping; and

program instructions for visually indicating the grouping in the first display area in response to selection of the two or more predicates, wherein the grouping further comprises one or more of the group consisting of:|

indenting the grouped predicates relative to other predicates of the search condition;

positioning the grouped predicates adjacent to each other; and

delineating the group with parenthesis or an equivalent symbol.


36.    (Original)  The article of manufacture of claim 35, wherein the program instructions for selecting further comprises program instructions for highlighting the two or more predicates.

37-38. (Cancelled)

39.     (Original) The article of manufacture of claim 35, further comprising program instructions for confirming selection of the two or more predicates for grouping.

40.     (Original) The article of manufacture of claim 39, wherein the program instructions for indicating grouping are responsive to selection confirmation.

41.     (Original) The article of manufacture of claim 39, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

42.     (Original) The article of manufacture of claim 39, further comprise program instructions for causing a model instance to be updated with the selected grouping upon confirmation.

43.     (Original) The article of manufacture of claim 37, further comprising program instructions for selecting one or more of grouped predicates for ungrouping.

44.     (Original) The article of manufacture of claim 43, further comprising program instructions for removing the indications of grouping from the first display area in response to the step of selecting grouped predicates.

45.     (Original)  The article of manufacture of claim 43, further comprising program instructions for confirming selection of the one or more grouped predicates for ungrouping.

46.     (Original)  The article of manufacture of claim 45, further comprising program instructions for removing the indications of the grouping for the first display are in response to selection confirmation.

47.     (Original)  The article of manufacture of claims 45, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing.

48.     (Original)  The article of manufacture of claim 45, further comprising program instructions for updating a model instance with the selected ungrouping upon confirmation.

49.     (Original)  The article of manufacture of claim 35, wherein the program instructions for displaying the search condition further comprise program instructions for displaying each search predicate in a separate line of the first display area.

50.     (Original)  The article of manufacture of claim 35, wherein the program

instructions for displaying the search condition further comprise program instructions for displaying each operator in a separate line of the first display area.

51.     (Original)  The article of manufacture of claim 35, further comprising program instructions for receiving a query statement from an application for populating the interface.

52.     (Previously Presented)  The query assist tool of claim 1, further comprising:

        means for displaying at least a portion of the query statement in a second display area.

53.     (Previously Presented)  The method of claim 18, further comprising:

        displaying at least a portion of the query statement in a second display area.

54.     (Previously Presented)  The article of manufacture of claim 1, further comprising:

        program instructions for displaying at least a portion of the query statement in a second display area.

# EVIDENCE APPENDIX

None

# RELATED PROCEEDINGS APPENDIX

None